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[54] **METHOD OF FABRICATING TUBULAR COMPOSITE STRUCTURES**

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[52] **U.S. Cl.** ..... **264/102**; 264/257; 264/313; 264/314; 425/389; 425/405 H; 425/DIG. 19; 425/DIG. 44

[58] **Field of Search** ..... 264/102, 314, 512, 571, 264/313, 257, 137, 510; 425/389, DIG. 19, DIG. 44, 405 H

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[57] **ABSTRACT**

A method of fabricating a fiber reinforced resin composite article having tubular structures that has improved density and fewer voids. The method comprises laying up a prepreg that has at least two tubular structures and disposing a thermally conductive metallic support structure within and in contact with the tubular structures. The prepreg is disposed within and in substantially complete contact with a tool which has at least one hole. An expandable bag having at least one opening in communication with a tube is inserted within each tubular structure thereby forming a void space between the bag and the tubular structure. The void space is substantially filled with a solid flowable particulate silicone rubber that contacts the prepreg and the tube is sealed to edge of hole in the tool. The solid flowable rubber is caused to transfer a substantially uniform predetermined pressure to the surface of the prepreg by pressurizing the expandable bag. The composite prepreg is exposed to heat by conducting heat through the thermally conductive metallic support structure in order to cure the composite article.

3 Claims, 2 Drawing Figures